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MNX1/HLXB9 Rabbit pAb

Catalog # AP99749

Product Information

Application	WB
Primary Accession	P50219
Other Accession	P50219
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	40569
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human HLXB9
Epitope Specificity	231-330/401
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 homeobox DNA-binding domain.
DISEASE	Defects in MNX1 are a cause of Currarino syndrome (CURRAS) [MIM:176450]. The triad of a presacral tumor, sacral agenesis and anorectal malformation constitutes the Currarino syndrome which is caused by dorsal-ventral patterning defects during embryonic development. The syndrome occurs in the majority of patients as an autosomal dominant trait.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The HB9 homeobox transcription factor regulates gene expression during embryonic development and also in specific adult tissues. HB9 gene mutations are implicated in Curriano syndrome, which is characterized by a triad consisting of a presacral tumor, sacral agenesis and anorectal malformation. In human bone marrow cells, HB9 expression directly correlates with CD34 expression. Furthermore, HB9 expression increases in CD34+ cells that are treated with IL-3 and granulocyte macrophage-colony-stimulating factor. Early in murine development, HB9 is expressed in pancreatic buds (dorsal and ventral) with subsequent expression in differentiating beta cells in the islets of Langerhans. The dorsal lobe of the pancreas fails to form in HB9(-) mice; the resultant pancreas has smaller islets of Langerhans and less beta cells than normal pancreas. The HB9 gene is expressed in the human adult pancreas. In the developing vertebrate embryo, the HB9 gene plays an essential role in motor neuron differentiation. The motor columns of HB9(-) mice are disorganized, lacking phrenic and abducens nerves and exhibiting intercostal nerve defects.

Additional Information

Gene ID	3110
Other Names	HB9; HLXB9; HOXHB9; SCRA1; MNR2; MNX1_HUMAN; MNX1; Homeobox

	protein HB9; MNX1_MOUSE; motor neuron and pancreas homeobox 1; homeo box HB9; homeobox HB9
Dilution	WB=1:500-2000,ICC/IF=1:100-500,Flow-Cyt=1ug/test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	MNX1
Synonyms	HLXB9
Function	Transcription factor (By similarity). Recognizes and binds to the regulatory elements of target genes, such as visual system homeobox CHX10, negatively modulating transcription (By similarity). Plays a role in establishing motor neuron identity, in concert with LIM domain transcription factor LMO4 (By similarity). Involved in negatively modulating transcription of interneuron genes in motor neurons, acting, at least in part, by blocking regulatory sequence interactions of the ISL1-LHX3 complex (By similarity). Involved in pancreas development and function; may play a role in pancreatic cell fate specification (By similarity).
Cellular Location	Nucleus.
Tissue Location	Expressed in lymphoid and pancreatic tissues.

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